b) inputting a command provided by a user to move the surgical instrument in a desired direction relative to an object displayed on a display device;

c) computing an incremental movement of the surgical instrument based on the command provided by the user and on the original position of the surgical instrument;

d) moving the surgical instrument in the desired direction so that the surgical instrument tip always moves in a direction commanded by the user.

116. A method for allowing an operator to control a movement of a surgical instrument having an end effector at a remote worksite, the method comprising:

a) inputting a command provided by the operator to move the surgical instrument in a desired direction relative to an object displayed on a display device;

b) computing a movement of the surgical instrument based on the command provided by the operator; and

c) moving the surgical instrument in the desired direction so that the end effector always moves in the direction commanded by the operator.

117. The method of claim 116 wherein the moving step comprises pivoting a shaft of the surgical instrument about a pivot point at an incision into a patient.--

REMARKS

Claims 115-117 have been added. Claim 115 corresponds exactly to claim 1 of U.S. Patent 5,878,193 (the '193 patent), which issued to Wang et al. on March 2, 1999. Claim 116 substantially corresponds to claim 1 of the '193 patent.

Applicant respectfully requests that an interference be declared under 37 C.F.R. §1.607 between the present application and the '193 patent.

The present application, U.S. patent application serial No. 08/709,930, filed on September 9, 1996, is a continuation of U.S. patent application Serial No. 07/823,932, filed on January 21, 1992. The '193 patent issued from Application No. 732,015, which was filed on October 16, 1996; which was a Continuation of Application No. 481,926, filed on June 6, 1995

(which issued as Patent No. 5,657,429); which was a continuation of Application No. 167,704, filed December 15, 1993 (now abandoned); which is a continuation-in-part[1] of Application No. 72,982, filed June 3, 1993 (which issued as Patent No. 5,524,180); which was a continuation-in-part of Application No. 5,604, filed on January 19, 1993 (now abandoned); which was a continuation-in-part of Application No. 927,801 filed Aug 10, 1992 (now abandoned) [2]. Therefore, applicant believes that applicant would be senior party in any interference proceedings.

Under M.P.E.P. §2307 and 37 C.F.R. §1.607, applicant requests this interference be declared between the present application and the unexpired '193 patent, and has satisfied each requirement of 37 C.F.R. §1.607 as follows:

(1) The unexpired patent is U.S. patent No. 5,878,193, which issued to Wang et al. on March 2, 1999.

(2) The Proposed Count is as follows:

Count 1

(i) A method for allowing a user to remotely control a movement of a surgical instrument having a tip, the method comprising the steps:

a) establishing an original position of the surgical instrument tip;

b) inputting a command provided by a user to move the surgical instrument in a desired direction relative to an object displayed on a display device;

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[1] The face of the '193 patent erroneously states that application Serial No. 167,704 was a "continuation" of application Serial No. 72,982.

[2] Applicant does not admit that application Serial No. 927,801, nor any of the underlying applications, supports either the Proposed Count or the claims of the '193 patent.

c) computing an incremental movement of the surgical instrument based on the command provided by the user and on the original position of the surgical instrment;

d) moving the surgical instrument in the desired direction so that the surgical instument tip always moves in a direction commanded by the user;

OR

(ii) A method for allowing an operator to control a movement of a surgical instrument having an end effector at a remote worksite, the method comprising:

a) inputting a command provided by the operator to move the surgical instrument in a desired direction relative to an object displayed on a display device;

b) computing a movement of the surgical instrument based on the command provided by the operator; and

c) moving the surgical instrument in the desired direction so that the end effector always moves in the direction commanded by the operator.

Proposed Count 1 is a phantom count and has for its first part (i) claim 1 (the broadest claim) of the '193 patent; and for its second part (ii) claim 116 of the present application, a claim substantially corresponding to claim 1 of the '193 patent. As is required under 37 C.F.R. §1.606, the Proposed Count is not narrower in scope than any patent claim or pending application claim designated to correspond to the count.

(3) It is respectfully submitted that all claims (1-3) of the '193 patent correspond to the Proposed Count. Claim 1 of the '193 patent corresponds exactly to the Proposed Count. Claims 2 and 3 of the '193 patent

correspond substantially to the Proposed Count, since each would have been obvious in view of the Proposed Count.

(4) It is respectfully submitted that claims 115-117 of the present application correspond to the Proposed Count.

(5) Support for claims 115-117 is found throughout the specification as originally filed in parent application 07/823,932. Once again, the present application (08/709,930, filed on September 9, 1996) is a continuation of the parent application, which was filed on January 21, 1992. Specifically, examples of support in the parent application are found as tabulated below.

Claim 115 (Claim 1 of '193 Patent)	Support in Parent Application 07/823,932
A method for allowing a user to remotely control a movement of a surgical instrument having a tip, the method comprising the steps:	As stated on page 1, lines 2-6, the invention relates generally to teleoperator robotic systems. Page 13, lines 1-33 explain that Figs. 7 through 9 illustrate embodiments adapted for minimally invasive surgery. Surgical end effectors 114 are moved by manipulators 100, which are inserted through abdominal wall 106.
a) establishing an original position of the surgical instrument tip;	Page 5, line 25 through page 6, line 24 explain that manipulators arms 34 move end effectors 40 using robotic motor control circuits. Robotic controllers inherently establish an original position before movement of the end effector. Page 21, lines 29-35 list a variety of position encoders to measure end effector positions.

b) inputting a command provided by a user to move the surgical instrument in a desired direction relative to an object displayed on a display device;	As illustrated in Fig. 1-3 and described, for example, on page 5, lines 25-33; on page 8, lines 14-25; and on page 11, lines 21-28, commands are input by an operator to move end effectors 40 relative to an object 26 shown in display 54 by moving controllers 70.
c) computing an incremental movement of the surgical instrument based on the command provided by the user and on the original position of the surgical instrment;	Fig. 1 illustrates and, for example, page 21, lines 1-8 state, computer 42 calculates movements of the end effector, remapping the commands so that the end effector will move in the desired direction. Per page 5, line 25 through page 6, line 24, computer 42 makes use of robotic motor control circuits. Robotic motor control circuits inherently base movements on the original position of the linkage supporting the end effector.
d) moving the surgical instrument in the desired direction so that the surgical instument tip always moves in a direction commanded by the user;	As illustrated in Fig. 1-4, 7-9, and 12, and as described, for example, on page 5, lines 25-33; on page 8, lines 14-25; and on page 11, lines 21-28, the surgical instrument moves in the desired direction so that the end effector 40, 114 always moves in a direction commanded by the operator.

Claim 116	Support in Parent Application 07/823,932
A method for allowing an operator to control a movement of a surgical instrument having an end effector at a remote worksite, the method comprising:	As stated on page 1, lines 2-6, the invention relates generally to teleoperator robotic systems. Page 13, lines 1-33 explain that Figs. 7 through 9 illustrate embodiments adapted for minimally invasive surgery. Surgical end effectors 114 are moved by manipulators 100, which are inserted through abdominal wall 106.
a) inputting a command provided by an operator to move the surgical instrument in a desired direction relative to an object displayed on a display device;	As illustrated in Fig. 1-3 and described, for example, on page 5, lines 25-33; on page 8, lines 14-25; and on page 11, lines 21-28, commands are input by an operator to move end effectors 40 relative to an object 26 shown in display 54 by moving controllers 70.
b) computing a movement of the surgical instrument based on the command provided by the user; and	Fig. 1 illustrates and, for example, page 21, lines 1-8 state, computer 42 calculates movements of the end effector, remapping the commands so that the end effector will move in the desired direction. Per page 5, line 25 through page 6, line 24, computer 42 makes use of robotic motor control circuits. Robotic motor control circuits inherently base movements on the original position of the linkage supporting the end effector.

c) moving the surgical instrument in the desired direction so that the end effector always moves in the direction commanded by the user	As illustrated in Fig. 1-4, 7-9, and 12, and as described, for example, on page 5, lines 25-33; on page 8, lines 14-25; and on page 11, lines 21-28, the surgical instrument moves in the desired direction so that the end effector 40, 114 always moves in a direction commanded by the operator.

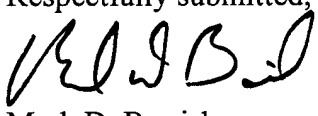
Claim 117	Support in Parent Application 07/823,932
The method of claim 116 wherein the moving step comprises pivoting a shaft of the surgical instrument about a pivot point at an incision into a patient.	Page 17, line 27-page 18, line 8 state that the instrument is moved within a patient by pivoting the forearm 174 shaft about pivot point 176 at an incision through the abdominal wall.

(6) The requirements of 35 U.S.C. §135(b) are met because the '193 patent was issued on March 2, 1999, which is less than one year before the filing date of this Supplementary Preliminary Amendment (May 28, 1999) which adds claims 115-117 to the above-referenced application.

CONCLUSION

In view of the above, applicant believes that no new matter has been introduced. Applicant respectfully requests that the Examiner declare an interference with the '193 patent, and furthermore, requests that the examination of the present application be conducted with special dispatch, per 37 C.F.R. §1.607(b).

Respectfully submitted,



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